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☐ 1. Document ID: US 6324619 B1

L4: Entry 1 of 59

File: USPT

Nov 27, 2001

US-PAT-NO: 6324619

DOCUMENT-IDENTIFIER: US 6324619 B1

TITLE: Process and system for managing run-time adaptation for general purpose distributed adaptive applications

DATE-ISSUED: November 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Raverdy; Pierre-Guillaume	Santa Clara	CA		
Lea; Rodger J.	San Jose	CA		

US-CL-CURRENT: 717/11

ABSTRACT:

A method and system for managing run-time adaptation for general purpose distributed adaptive applications. Using the present software run-time environment, application designers would be able to quickly develop distributed adaptive software, such as network or web software, without having to deal with the details of the distribution and adaptation. To achieve both distribution and adaptation, meta-level object programming techniques and run-time monitoring techniques are applied. Importantly, a run-time adaptation manager is provided for configuring the application execution environments, and for managing adaptations for both reflective methods and adaptive methods. In addition, the adaptation manager coordinates the adaptation of multiple objects in a coherent manner by keeping track of instances of the adaptive classes and the platform services that they are using. The adaptation manager also records the adaptation policies and monitors the system state and user preferences. Based on the adaptation policies and the system state, the adaptation manager executes related policies and decides which, how, and when objects should be adapted.

19 Claims, 7 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 7

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw Desc	Image
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☐ 2. Document ID: US 6324525 B1

L4: Entry 2 of 59

File: USPT

Nov 27, 2001

US-PAT-NO: 6324525

DOCUMENT-IDENTIFIER: US 6324525 B1

TITLE: Settlement of aggregated electronic transactions over a network

DATE-ISSUED: November 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kramer; Glenn A.	San Francisco	CA		
Weber; Jay C.	Menlo Park	CA		

US-CL-CURRENT: 705/40

ABSTRACT:

In one embodiment, an architecture that consummates an electronic transaction between a first electronic device, such as an acquirer device, a second electronic device, such as an issuer device, and a plurality of electronic terminals, such as merchant terminals, by establishing a communication between the plurality of devices and terminals and accumulating transactions that are approved by the second electronic device. Then, periodically the plurality of transactions are settled using a transfer of monetary value between the first electronic device and the second electronic device. For example, the present invention uses electronic cash transfer to replace conventional settlement, which requires the use of a third-party settlement service.

24 Claims, 130 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 78

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 3. Document ID: US 6317718 B1

L4: Entry 3 of 59

File: USPT

Nov 13, 2001

US-PAT-NO: 6317718

DOCUMENT-IDENTIFIER: US 6317718 B1

TITLE: System, method and article of manufacture for location-based filtering for shopping agent in the physical world

DATE-ISSUED: November 13, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fano; Andrew Ernest	Evanston	IL		

US-CL-CURRENT: 705/1; 705/14

ABSTRACT:

An agent based system utilizes a Personal Digital Assistant (PDA)-based, Global Positioning System (GPS)-enabled information gathering agent to create a customized offer information summary based on the location of a user and one or more items of interest. One or more items of interest are obtained from a user. The physical location of the user is determined. A query based on the items of interest and the physical location of the user is then created. A network of information is queried utilizing this query. A customized offer is received from a retailer-based agent in response to the query. The customized offer information associated with the items of interest and their locations relative to the physical location of the user is displayed.

18 Claims, 28 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 26

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 4. Document ID: US 6304915 B1

L4: Entry 4 of 59

File: USPT

Oct 16, 2001

US-PAT-NO: 6304915

DOCUMENT-IDENTIFIER: US 6304915 B1

TITLE: System, method and article of manufacture for a gateway system architecture with system administration information accessible from a browser

DATE-ISSUED: October 16, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nguyen; Trong	Sunnyvale	CA		
Subramanian; Mahadevan P.	Foster City	CA		
Haller; Daniel R.	Menlo Park	CA		

US-CL-CURRENT: 709/250; 709/217, 709/230

ABSTRACT:

Secure transmission of data is provided between a plurality of computer systems over a public communication system, such as the Internet. Secure transmission of data is provided from a customer computer system to a merchant computer system, and for the further secure transmission of payment information from the merchant computer system to a payment gateway computer system. The payment gateway system receives encrypted payment requests from merchants, as HTTP POST messages via the Internet. The gateway then unwraps and decrypts the requests, authenticates digital signatures of the requests based on certificates, supports transaction types and card types as required by a financial institution, and accepts concurrent VPOS transactions from each of the merchant servers. Then, the gateway converts transaction data to host-specific formats and forwards the mapped requests to the host processor using the existing financial network. The gateway system architecture includes support for standard Internet access routines which facilitate access to system administration information from a commercial web browser.

20 Claims, 112 Drawing figures Exemplary Claim Number: 1,9
Number of Drawing Sheets: 60

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 5. Document ID: US 6301579 B1

L4: Entry 5 of 59

File: USPT

Oct 9, 2001

US-PAT-NO: 6301579

DOCUMENT-IDENTIFIER: US 6301579 B1

TITLE: Method, system, and computer program product for visualizing a data structure

DATE-ISSUED: October 9, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Becker; Barry G.	Mountain View	CA		

US-CL-CURRENT: 707/102; 345/440

ABSTRACT:

A data structure visualization tool visualizes a data structure such as a decision table classifier. A data file based on a data set of relational data is stored as a relational table, where each row represents an aggregate of all the records for each combination of values of the attributes used. Once loaded into memory, an inducer is used to construct a hierarchy of levels, called a decision table classifier, where each successive level in the hierarchy has two fewer attributes. Besides a column for each attribute, there is a column for the record count (or more generally, sum of record weights), and a column containing a vector of probabilities (each probability gives the proportion of records in each class). Finally, at the top-most level, a single row represents all the data. The decision table classifier is then passed to the visualization tool for display and the decision table classifier is visualized. By building a representative scene graph adaptively, the visualization application never loads the whole data set into memory. Interactive techniques, such as drill-down and drill-through are used view further levels of detail or to retrieve some subset of the original data. The decision table visualizer helps a user understand the importance of specific attribute values for classification.

20 Claims, 27 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 22

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 6. Document ID: US 6289382 B1

L4: Entry 6 of 59

File: USPT

Sep 11, 2001

US-PAT-NO: 6289382

DOCUMENT-IDENTIFIER: US 6289382 B1

TITLE: System, method and article of manufacture for a globally addressable interface in a communication services patterns environment

DATE-ISSUED: September 11, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bowman-Amuah; Michel K.	Colorado Springs	CO		

US-CL-CURRENT: 709/226

ABSTRACT:

A system, method, and article of manufacture are provided for delivering service via a globally addressable interface. A plurality of interfaces are provided with access allowed to a plurality of different sets of services from each of the interfaces. Each interface has a unique set of services associated therewith. Each of the interfaces is named with a name indicative of the unique set of services associated therewith. The names of the interfaces are then broadcast to a plurality of systems requiring service.

15 Claims, 195 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 122

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw. Desc	Image
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☐ 7. Document ID: US 6272493 B1

L4: Entry 7 of 59

File: USPT

Aug 7, 2001

US-PAT-NO: 6272493

DOCUMENT-IDENTIFIER: US 6272493 B1

TITLE: System and method for facilitating a windows based content manifestation environment within a WWW browser

DATE-ISSUED: August 7, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Pasquali; Sandro	Sante Fe	NM		

US-CL-CURRENT: 707/10

ABSTRACT:

System and method for facilitating a windowed content manifestation environment within a world wide web (WWW) browser client. The system and method include and involve a server system that is configured to serve a software system and associated content via an electronic data network such as the Internet and WWW. Also included and involved is a web browser client (web browser software application) operating within a data processing system that is coupled to said server system via the electronic data network and which instantiates a content manifestation environment (e.g., a dynamic screen display environment within the data processing system). The web browser client is operative to receive the software system and the associated content via the server system, to process the software system and the associated content to produce at least one window object within the content manifestation environment. The generated window object(s) are each associated with a set of controllable attributes and are configured to manifest at least a portion of the associated content. The controllable attributes are configured to affect manifestation of the window object(s) by the web browser client within the content manifestation environment. The window object(s) generated within the content manifestation environment may be updated and loaded with content received via the electronic data network without requiring the content manifestation environment to be refreshed (e.g., without requiring screen refresh operations), and in real-time without requiring user intervention such as via hyper-link traversal.

13 Claims, 10 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 10

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw. Desc	Image
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☐ 8. Document ID: US 6256676 B1

L4: Entry 8 of 59

File: USPT

Jul 3, 2001

US-PAT-NO: 6256676

DOCUMENT-IDENTIFIER: US 6256676 B1

TITLE: Agent-adapter architecture for use in enterprise application integration systems

DATE-ISSUED: July 3, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Taylor; John Timothy	Leesburg	VA		
Yee; Hon-Siew	Herndon	VA		

US-CL-CURRENT: 709/246

ABSTRACT:

An agent-adapter architecture used in systems and methods to integrate applications of the type normally deployed across a networked enterprise. A plurality of adapters, each of which is adapted to perform a discrete function associated with respective ones of the plurality of enterprise applications is encapsulated by an agent. The agent is extensible, including one or more embedded objects, each of which is adapted to perform a discrete function that may or may not be associated with respective ones of the plurality of enterprise applications.

51 Claims, 31 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 15

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KMIC	Draw Desc	Image
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☐ 9. Document ID: US 6253193 B1

L4: Entry 9 of 59

File: USPT

Jun 26, 2001

US-PAT-NO: 6253193

DOCUMENT-IDENTIFIER: US 6253193 B1

TITLE: Systems and methods for the secure transaction management and electronic rights protection

DATE-ISSUED: June 26, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ginter; Karl L.	Beltsville	MD		
Shear; Victor H.	Bethesda	MD		
Spahn; Francis J.	El Cerrito	CA		
Van Wie; David M.	Sunnyvale	CA		

US-CL-CURRENT: 705/57; 705/52

ABSTRACT:

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

72 Claims, 155 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 146

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 10. Document ID: US 6253027 B1

L4: Entry 10 of 59

File: USPT

Jun 26, 2001

US-PAT-NO: 6253027

DOCUMENT-IDENTIFIER: US 6253027 B1

TITLE: System, method and article of manufacture for exchanging software and configuration data over a multichannel, extensible, flexible architecture

DATE-ISSUED: June 26, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weber; Jay C.	Menlo Park	CA		
Rowney; Kevin T. B.	San Francisco	CA		
Kramer; Glenn A.	San Francisco	CA		

US-CL-CURRENT: 380/287; 705/26, 705/50, 713/150, 713/151, 713/164, 713/168, 713/175, 713/180, 713/200, 713/201

ABSTRACT:

Secure transmission of data is provided between a plurality of computer systems over a public communication system, such as the Internet. Secure transmission of data is provided from a customer computer system to a merchant computer system, and for the further secure transmission of payment information regarding a payment instrument from the merchant computer system to a payment gateway computer system. The payment gateway system evaluates the payment information and returns a level of authorization of credit via a secure transmission to the merchant which is communicated to the customer by the merchant. The merchant can then determine whether to accept the payment instrument tendered or deny credit and require another payment instrument. An architecture that provides support for additional message types that are not SET compliant is provided by a preferred embodiment of the invention. A server communicating bidirectionally with a gateway is disclosed. The server communicates to the gateway over a first communication link, over which all service requests are initiated by the server. The gateway uses a second communication link to send service signals to the server. In response to the service signals, the server initiates transactions to the gateway or presents information on an a display device.

21 Claims, 109 Drawing figures Exemplary Claim Number: 8
Number of Drawing Sheets: 57

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 11. Document ID: US 6237786 B1

L4: Entry 11 of 59

File: USPT

May 29, 2001

US-PAT-NO: 6237786

DOCUMENT-IDENTIFIER: US 6237786 B1

TITLE: Systems and methods for secure transaction management and electronic rights protection

DATE-ISSUED: May 29, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ginter; Karl L.	Beltsville	MD		
Shear; Victor H.	Bethesda	MD		
Spahn; Francis J.	El Cerrito	CA		
Van Wie; David M.	Eugene	OR		

US-CL-CURRENT: 213/153; 380/203, 705/51, 705/58

ABSTRACT:

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

8 Claims, 155 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 146

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 12. Document ID: US 6202062 B1

L4: Entry 12 of 59

File: USPT

Mar 13, 2001

US-PAT-NO: 6202062

DOCUMENT-IDENTIFIER: US 6202062 B1

TITLE: System, method and article of manufacture for creating a filtered information summary based on multiple profiles of each single user

DATE-ISSUED: March 13, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP	CODE	COUNTRY
Cameron; Richard Neill	Mouans Sartoux				FRX
Feinbier; Loic Jaouen	Le Cannet				FRX
Van den Hondel; Alexander Peter Chateauneuf de Grasse					FRX

US-CL-CURRENT: 707/3; 707/102, 707/4, 707/5, 707/6, 707/7

ABSTRACT:

An agent based system assists in obtaining information from an article of interest and utilizes the information to take user directed action based on the information from the target article. The system obtains input text in character form indicative of the target meeting from the a calendar program that includes the time of the meeting. As the time of the meeting approaches, the calendar program is queried to obtain the text of the target event and that information is utilized as input to the agent system. Then, the agent system parses the input meeting text to extract its various components such as title, body, participants, location, time etc. The system also performs pattern matching to identify particular appropriate information. This information is utilized to query various sources of information on the web and obtain relevant stories about the current meeting to send back to the calendaring system.

20 Claims, 39 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 33

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KMIC	Draw Desc	Image
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☐ 13. Document ID: US 6199099 B1

L4: Entry 13 of 59

File: USPT

Mar 6, 2001

US-PAT-NO: 6199099

DOCUMENT-IDENTIFIER: US 6199099 B1

TITLE: System, method and article of manufacture for a mobile communication network utilizing a distributed communication network

DATE-ISSUED: March 6, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gershman; Anatole Vitaly	Chicago	IL		
Swaminathan; Kishore Sundaram	Downers Grove	IL		
Meyers; James L.	Chicago	IL		
Fano; Andrew Ernest	Evanston	IL		

US-CL-CURRENT: 709/203; 345/966, 345/968, 707/104.1, 707/3, 709/201, 709/217, 709/225

ABSTRACT:

A system, method, and article of manufacture are provided for obtaining information on a mobile computing environment utilizing a distributed communication network. A pattern template is generated. This pattern template is stored on a thin client computer. A query is then created on the thin client computer based in part on user input. A network is queried for information utilizing a distributed communication network. A response is then received to the query from the distributed communication network. This response is processed utilizing an application tool on the thin client computer. The response is filtered by the application tool based on the pattern template. Information is then displayed to a user.

20 Claims, 30 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 30

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 14. Document ID: US 6195651 B1

L4: Entry 14 of 59

File: USPT

Feb 27, 2001

US-PAT-NO: 6195651

DOCUMENT-IDENTIFIER: US 6195651 B1

TITLE: System, method and article of manufacture for a tuned user application experience

DATE-ISSUED: February 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Handel; Sean	San Francisco	CA		
Day; Brian	Burlingame	CA		
Yuen; Miya	Foster City	CA		

US-CL-CURRENT: 707/2; 707/5

ABSTRACT:

A system is disclosed that facilitates a web-based user interface to a particular application program that is enabled by obtaining user profile information, parsing the content of the particular application, matching the parsed content to user profile information and presenting the parsed content matches in a format based on information in the user's profile on a display. An innovative pattern matching system is integrated into the match processing to provide improved matching capability.

20 Claims, 27 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 27

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 15. Document ID: US 6178409 B1

L4: Entry 15 of 59

File: USPT

Jan 23, 2001

US-PAT-NO: 6178409

DOCUMENT-IDENTIFIER: US 6178409 B1

TITLE: System, method and article of manufacture for multiple-entry point virtual point of sale architecture

DATE-ISSUED: January 23, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weber; Jay C.	Menlo Park	CA		
Berger; David A.	San Mateo	CA		
Arora; Atul	San Jose	CA		

US-CL-CURRENT: 705/79; 380/255, 380/287, 705/26, 705/39, 705/40, 705/44, 705/76, 705/77, 713/150, 713/153, 713/155, 713/156, 713/168, 713/175

ABSTRACT:

A server communicates bidirectionally with a gateway over a first communication link, over which service requests flow to the server for one or more merchants and/or consumers. Service requests are associated with a particular merchant based on storefront visited by a consumer or credentials presented by a merchant. Service requests result in merchant specific transactions that are transmitted to the gateway for further processing on existing host applications.

24 Claims, 109 Drawing figures Exemplary Claim Number: 9
Number of Drawing Sheets: 57

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 16. Document ID: US 6169981 B1

L4: Entry 16 of 59

File: USPT

Jan 2, 2001

US-PAT-NO: 6169981

DOCUMENT-IDENTIFIER: US 6169981 B1

TITLE: 3-brain architecture for an intelligent decision and control system

DATE-ISSUED: January 2, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Werbos; Paul J.	College Park	MD	20740-2403	

US-CL-CURRENT: 706/23; 706/15, 706/16, 706/26, 706/27

ABSTRACT:

A method and system for intelligent control of external devices using a mammalian brain-like structure having three parts. The method and system include a computer-implemented neural network system which is an extension of the model-based adaptive critic design and is applicable to real-time control (e.g., robotic control) and real-time distributed control. Additional uses include data visualization, data mining, and other tasks requiring complex analysis of inter-relationships between data.

18 Claims, 38 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 27

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 17. Document ID: US 6163772 A

L4: Entry 17 of 59

File: USPT

Dec 19, 2000

US-PAT-NO: 6163772

DOCUMENT-IDENTIFIER: US 6163772 A

TITLE: Virtual point of sale processing using gateway-initiated messages

DATE-ISSUED: December 19, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kramer; Glenn A.	San Francisco	CA		
Weber; Jay C.	Menlo Park	CA		

US-CL-CURRENT: 705/79; 705/78, 709/224, 709/249, 713/153

ABSTRACT:

Secure transmission of data is provided between a plurality of computer systems over a public communication system, such as the Internet. For example, secure transmission of data is provided between a merchant server and an acquirer gateway using Secure Electronic Transaction (SET) compliant messages. However, gateway-initiated messages are not SET compliant. Accordingly, secure transmission of data using additional messages that are not SET compliant is provided in accordance with one embodiment of the present invention. In one embodiment, a method for virtual point of sale processing using gateway-initiated messages, includes establishing a first communication link (e.g., operating under the Internet Protocol) between an acquirer gateway and a merchant server, the first communication link being initiated by the acquirer gateway, and transmitting a gateway-initiated message (e.g., a Multipurpose Internet Mail Extensions (MIME) -encapsulated PKCS-7 message that includes a request for management information base data of the merchant server) via the first communication link from the acquirer gateway to the merchant server. The method also includes establishing a second communication link (e.g., operating under the Internet Protocol) between the acquirer gateway and the merchant server, the second communication link being initiated by the merchant server, and transmitting a Secure Electronic Transaction (SET) message via the second communication link from the merchant server to the acquirer gateway.

27 Claims, 108 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 57

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 18. Document ID: US 6144984 A

L4: Entry 18 of 59

File: USPT

Nov 7, 2000

US-PAT-NO: 6144984

DOCUMENT-IDENTIFIER: US 6144984 A

TITLE: Method and apparatus for controlling connected computers without programming

DATE-ISSUED: November 7, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
DeBenedictis; Erik P.	Redwood City	CA	94065	
Johnson; Stephen C.	Palo Alto	CA	94301	

US-CL-CURRENT: 709/106; 709/102

ABSTRACT:

A process for creating, maintaining, and executing network applications. A user specifies a network application as an interconnection of tasks, each task being addressed to run on one or more computers. Process steps install and execute the application with accommodation for dynamically changing addresses. During execution, process steps compile or interpret source code on remote computers as needed. Process steps permit application changes during execution subject to limitations and fail-safes that prevent non-programmers from creating invalid changes.

12 Claims, 32 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 22

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 19. Document ID: US 6138119 A

L4: Entry 19 of 59

File: USPT

Oct 24, 2000

US-PAT-NO: 6138119
DOCUMENT-IDENTIFIER: US 6138119 A

TITLE: Techniques for defining, using and manipulating rights management data structures

DATE-ISSUED: October 24, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hall; Edwin J.	San Jose	CA		
Shear; Victor H.	Bethesda	MD		
Tomasello; Luke S.	San Jose	CA		
Van Wie; David M.	Sunnyvale	CA		
Weber; Robert P.	Menlo Park	CA		
Worsencroft; Kim	Los Gatos	CA		
Xu; Xuejun	Fremont	CA		

US-CL-CURRENT: 707/9; 707/102, 707/4

ABSTRACT:

A descriptive data structure provides an abstract representation of a rights management data structure such as a secure container. The abstract representation may describe, for example, the layout of the rights management data structure. It can also provide metadata describing or defining other characteristics of rights management data structure use and/or processing. For example, the descriptive data structure can provide integrity constraints that provide a way to state rules about associated information. The abstract representation can be used to create rights management data structures that are interoperable and compatible with one another. This arrangement preserves flexibility and ease of use without compromising security.

64 Claims, 15 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 14

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 20. Document ID: US 6134548 A

L4: Entry 20 of 59

File: USPT

Oct 17, 2000

US-PAT-NO: 6134548
DOCUMENT-IDENTIFIER: US 6134548 A

TITLE: System, method and article of manufacture for advanced mobile bargain shopping

DATE-ISSUED: October 17, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gottzman; Edward	Evanston	IL		
Brody; Adam	Chicago	IL		

US-CL-CURRENT: 707/5; 705/26, 707/10, 707/3, 709/217, 709/249

ABSTRACT:

A system is disclosed that facilitates web-based comparison shopping in conventional, physical, non-web retail environments. A wireless phone or similar hand-held wireless device with Internet Protocol capability is combined with a miniature barcode reader (installed either inside the phone or on a short cable) and utilized to obtain definitive product identification by, for example, scanning a Universal Product Code (UPC) bar code from a book or other product. The wireless device transmits the definitive product identifier to a service routine (running on a Web server), which converts it to (in the case of books) its International Standard Book Number or (in the case of other products) whatever identifier is appropriate. The service routine then queries the Web to find price, shipping and availability information on the product from various Web suppliers. This information is formatted and displayed on the hand-held device's screen. The user may then use the hand-held device to place an order interactively.

17 Claims, 27 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 27

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KUMC	Draw Desc	Image
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☐ 21. Document ID: US 6119105 A

L4: Entry 21 of 59

File: USPT

Sep 12, 2000

US-PAT-NO: 6119105
DOCUMENT-IDENTIFIER: US 6119105 A

TITLE: System, method and article of manufacture for initiation of software distribution from a point of certificate creation utilizing an extensible, flexible architecture

DATE-ISSUED: September 12, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Williams; Humphrey	Palo Alto	CA		

US-CL-CURRENT: 705/39; 705/26, 705/44

ABSTRACT:

Secure transmission of data is provided between a plurality of computer systems over a public communication system, such as the Internet. Secure transmission of data is provided from a customer computer system to a merchant computer system, and for the further secure transmission of payment information regarding a payment instrument from the merchant computer system to a payment gateway computer system. The payment gateway system evaluates the payment information and returns a level of authorization of credit via a secure transmission to the merchant which is communicated to the customer by the merchant. The merchant can then determine whether to accept the payment instrument tendered or deny credit and require another payment instrument. An architecture that provides support for additional message types that are not SET compliant is provided by a preferred embodiment of the invention. A server communicating bidirectionally with a gateway is disclosed. The server communicates to the gateway over a first communication link, over which all service requests are initiated by the server. The gateway uses a second communication link to send service signals to the server. In response to the service signals, the server initiates transactions to the gateway or presents information on an a display device.

24 Claims, 109 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 57

Full	Title	Citation	Front	Review	Classification	Date	Reference
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K00C	Draw Desc	Image
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☐ 22. Document ID: US 6094688 A

L4: Entry 22 of 59

File: USPT

Jul 25, 2000

US-PAT-NO: 6094688

DOCUMENT-IDENTIFIER: US 6094688 A

TITLE: Modular application collaboration including filtering at the source and proxy execution of compensating transactions to conserve server resources

DATE-ISSUED: July 25, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mellen-Garnett; Katrina A.	Hillsborough	CA		
Gupta; Prashant	Monterey	CA		

US-CL-CURRENT: 709/328; 709/101, 709/318

ABSTRACT:

In general, in one aspect, the invention provides a modular application collaborator for providing inter-operability between applications including a plurality of connectors for communicating with a like plurality of applications and an interchange server. The interchange server includes an application collaboration module and service module. The service module transfers messages between connectors and the application collaboration module. The application collaboration defines the inter-operability between two or more applications. The interchange server service module includes a transaction service and an error service. Transactions are executed in the application collaboration module and the transaction service records each action and a compensating action for undoing an associated action. An error service monitors for errors in the interchange server, and, upon detection of an error, stops the execution of a transaction and initiates the execution of any required compensating actions to undo the interrupted transaction. The compensating transactions may be executed at the connectors and are not required to be overseen by the interchange server.

16 Claims, 16 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 15

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 23. Document ID: US 6078924 A

L4: Entry 23 of 59

File: USPT

Jun 20, 2000

US-PAT-NO: 6078924

DOCUMENT-IDENTIFIER: US 6078924 A

TITLE: Method and apparatus for performing data collection, interpretation and analysis, in an information platform

DATE-ISSUED: June 20, 2000

INVENTOR- INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ainsbury; Robert D.	San Francisco	CA		
Al Hussein; Hussein K.	Santa Clara	CA		
Hinnant; Michael C.	Foster City	CA		
Lahham; Muwaffaq M.	San Francisco	CA		
Ludin; Stephen L.	San Rafael	CA		
Putterman; Daniel S.	San Francisco	CA		
Shotton; Frederick R.	Hercules	CA		
Tejada; Wilfredo M.	Portola Valley	CA		

US-CL-CURRENT: 707/101; 707/102

ABSTRACT:

An information platform automates the collection of data, provides a method for organizing the library of information and provides analysis using multiple content-types, thereby providing a user with a market understanding necessary to execute rapid and knowledgeable decision making. The information platform collects and integrates data, observations and intelligence; provides controls for multiple methods of information navigation and analysis; and allows details to be digested in the context of other data, regardless of its type. The information platform is a client/server implementation that is subdivided into four major sections, including: (1) Data Retrieval, which provides a sophisticated catalog for finding internal and external information and collection agents which retrieve specific information without user intervention; (2) Data Classification and Storage which handles the storage of the information once it has been gathered from a source; (3) Information Browsing, Query, Analysis, and Report Creation which provides information browsing, reporting, and analysis tools; and (4) Desktop Integration where the information platform takes information from a wide variety of formats (HTML, text, spreadsheet) and combines them all into a single format (HTML, text, spreadsheet).

11 Claims, 11 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 10

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 24. Document ID: US 6072870 A

L4: Entry 24 of 59

File: USPT

Jun 6, 2000

US-PAT-NO: 6072870
DOCUMENT-IDENTIFIER: US 6072870 A

TITLE: System, method and article of manufacture for a gateway payment architecture utilizing a multichannel, extensible, flexible architecture

DATE-ISSUED: June 6, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nguyen; Trong	Sunnyvale	CA		
Haller; Daniel R.	Menlo Park	CA		
Kramer; Glenn A.	San Francisco	CA		

US-CL-CURRENT: 705/79; 705/26, 705/35, 705/39, 705/40, 705/78, 713/201

ABSTRACT:

Secure transmission of data is provided between a plurality of computer systems over a public communication system, such as the Internet. Secure transmission of data is provided from a customer computer system to a merchant computer system, and for the further secure transmission of payment information from the merchant computer system to a payment gateway computer system. The payment gateway system formats transaction information appropriately and transmits the transaction to the particular host legacy system. The host legacy system evaluates the payment information and returns a level of authorization of credit to the gateway which packages the information to form a secure transaction which is transmitted to the merchant which is in turn communicated to the customer by the merchant. The merchant can then determine whether to accept the payment instrument tendered or deny credit and require another payment instrument. An architecture that provides support for additional message types that are value-added extensions to the basic SET protocol, is provided by a preferred embodiment of the invention.

22 Claims, 101 Drawing figures Exemplary Claim Number: 8
Number of Drawing Sheets: 57

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 25. Document ID: US 6049673 A

L4: Entry 25 of 59

File: USPT

Apr 11, 2000

US-PAT-NO: 6049673

DOCUMENT-IDENTIFIER: US 6049673 A

TITLE: Organicware applications for computer systems

DATE-ISSUED: April 11, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
McComb; David W.	Fort Collins	CO		
Long; James L.	Fort Collins	CO		
Hoare; Simon	Fort Collins	CO		

US-CL-CURRENT: 717/11

ABSTRACT:

A method for implementing a software application by shifting all the definition of an application into data, which need not be translated to code to be run, which is run by code which remains the same from application to application.

9 Claims, 23 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 18

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 26. Document ID: US 6026430 A

L4: Entry 26 of 59

File: USPT

Feb 15, 2000

US-PAT-NO: 6026430

DOCUMENT-IDENTIFIER: US 6026430 A

TITLE: Dynamic client registry apparatus and method

DATE-ISSUED: February 15, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Butman; Ronald A.	Nahant	MA	01908	
Ramachandran; Raja	Allston	MA	02134	
Burns; Thomas A.	Duxbury	MA	02332	
Malone; Thomas J.	South Boston	MA	02127	
Kniec; Michael D.	Boston	MA	02114	
Dougherty; Joseph C.	West Roxbury	MA	02131	

US-CL-CURRENT: 709/203; 709/217, 709/225, 709/227, 709/238, 709/239, 709/249

ABSTRACT:

A registry to organize information from client entities on different networks for selective sharing, having a first computer having a disk for storing a dynamic client registry and resource locators containing function names. A web server causes the first computer to respond to the resource locators by loading the function name indicated. A database management program organizes the dynamic client registry. The system also includes a domain communications server which is used by the web server to respond to resource locators directed to it and to direct the database management program in organizing the dynamic client registry; several secondary computers networked with the first, each having a disk for storing a dynamic group registry and resource locators containing function names, a web server which causes the secondary computer to respond to resource locators by loading the function name indicated, a database management program for organizing the dynamic group registry; a client side communications server in each secondary computer, which responds to resource locators directed to the client side communications server and which directs the database management program in organizing the dynamic group registry; a domain communications resource locator list stored in all computers that causes functions to be selected for execution in the domain communications server; a client side communications resource locator list stored in all computers that causes functions to be selected for execution in each client side communications server so that communications between the first computer and each secondary computer cause the selected functions to selectively direct information to secondary computers.

8 Claims, 67 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 45

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KNOWC	Draw Desc	Image
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☐ 27. Document ID: US 6026379 A

L4: Entry 27 of 59

File: USPT

Feb 15, 2000

US-PAT-NO: 6026379
DOCUMENT-IDENTIFIER: US 6026379 A

TITLE: System, method and article of manufacture for managing transactions in a high availability system

DATE-ISSUED: February 15, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Haller; Daniel R.	Menlo Park	CA		
Nguyen; Trong	Sunnyvale	CA		
Rowney; Kevin T. B.	San Francisco	CA		
Berger; David A.	San Mateo	CA		
Kramer; Glenn A.	San Francisco	CA		

US-CL-CURRENT: 705/34; 705/26, 705/27, 705/39

ABSTRACT:

An architecture is disclosed allowing a server to communicate bidirectionally with a gateway over a first communication link, over which service requests are initiated by the server. In response to a transaction received from a host legacy system at the gateway, the gateway parses one or more transaction response values from the host message, maps the one or more transaction response values to a canonical response code, and stores the canonical response code in a transaction log. According to a broad aspect of a preferred embodiment of the invention, communication networks that employ transactions between applications must effectively manage transactions that flow over the network. In addition, networking systems must also detect counterfeit transactions, especially, when the networking systems are utilized for financial transactions. An active, on-line database is utilized as a transaction log to track original requests, valid retries and detect fraudulent transactions. The transaction log serves as a memory cache where the received host response is returned to a valid retry transaction should the original response fail to reach a server because of a communications problem.

25 Claims, 106 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 57

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 28. Document ID: US 6006242 A

L4: Entry 28 of 59

File: USPT

Dec 21, 1999

US-PAT-NO: 6006242

DOCUMENT-IDENTIFIER: US 6006242 A

TITLE: Apparatus and method for dynamically creating a document

DATE-ISSUED: December 21, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Poole; Donald L.	St. Cloud	MN		
Wyman; Richard K.	St. Cloud	MN		

US-CL-CURRENT: 707/531

ABSTRACT:

An apparatus and method for dynamically constructing electronic and printable documents and forms. An entity reference is read from a document instance and compared to entity identifiers provided in a catalog containing a plurality of entity identifiers. Each of the entity identifiers in the catalog is associated with an entity resolution process. An inference engine or other entity resolving processor is invoked to effectuate the resolution process associated with a matching entity identifier. The inference engine or entity resolving processor resolves the entity reference to a resolved entity, such as a component of text or graphics to be included in a document. Linking between the document, entity reference, and resolved entity provides for detailed auditing of the entity resolution process. A resolved entity may contain one or more embedded entity references which are similarly resolved. The dynamic document construction methodology may be implemented using a distributed networking approach, or on a stand-alone computer system. A significant advantage of the present invention concerns the re-usability of textual, graphical, and other components, thereby providing for the construction of any arbitrary document type having any arbitrary number of presentation formats. In one embodiment, the inference engine used to resolve entity references is converted to an executable form to enhance portability. A document or form constructed in accordance with the present invention may be published in printed or electronic form, such as in the form of a World Wide Web (Web) page.

26 Claims, 29 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 29

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 29. Document ID: US 6002767 A

L4: Entry 29 of 59

File: USPT

Dec 14, 1999

US-PAT-NO: 6002767
DOCUMENT-IDENTIFIER: US 6002767 A

TITLE: System, method and article of manufacture for a modular gateway server architecture

DATE-ISSUED: December 14, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kramer; Glenn A.	San Francisco	CA		

US-CL-CURRENT: 705/79; 705/26, 705/27, 713/153

ABSTRACT:

Secure transmission of data is provided between a plurality of computer systems over a public communication system, such as the Internet. Secure transmission of data is provided from a customer computer system to a merchant computer system, and for the further secure transmission of payment information regarding a payment instrument from the merchant computer system to a payment gateway computer system. The payment gateway system evaluates the payment information and returns a level of authorization of credit via a secure transmission to the merchant which is communicated to the customer by the merchant. The merchant can then determine whether to accept the payment instrument tendered or deny credit and require another payment instrument. An architecture that provides support for additional message types that are value-added extensions to the SET protocol is provided by a preferred embodiment of the invention. A server communicating bidirectionally with a gateway is disclosed. The server communicates to the gateway over a first communication link, over which all service requests are initiated by the server. The gateway uses a second communication link to send service signals to the server. In response to the service signals, the server initiates transactions to the gateway or presents information on an a display device.

23 Claims, 101 Drawing figures Exemplary Claim Number: 9
Number of Drawing Sheets: 57

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 30. Document ID: US 5999525 A

L4: Entry 30 of 59

File: USPT

Dec 7, 1999

US-PAT-NO: 5999525

DOCUMENT-IDENTIFIER: US 5999525 A

TITLE: Method for video telephony over a hybrid network

DATE-ISSUED: December 7, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Krishnaswamy; Sridhar	Cedar Rapids	IA		
Elliott; Isaac K.	Colorado Springs	CO		
Reynolds; Tim E.	Iowa City	IA		
Forgy; Glen A.	Iowa City	IA		
Solbrig; Erin M.	Cedar Rapids	IA		

US-CL-CURRENT: 370/352; 370/389, 370/392, 379/114.15, 379/90.01, 379/93.07

ABSTRACT:

Telephone calls, data and other multimedia information including video, audio and data is routed through a switched network which includes transfer of information across the internet. Users can transmit video, audio and data communications of designated quality over the internet to other registered video telephony users. Users can manage more aspects of a network than previously possible, and control network activities from a central site.

30 Claims, 190 Drawing figures Exemplary Claim Number: 11
Number of Drawing Sheets: 134

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 31. Document ID: US 5996076 A

L4: Entry 31 of 59

File: USPT

Nov 30, 1999

US-PAT-NO: 5996076

DOCUMENT-IDENTIFIER: US 5996076 A

TITLE: System, method and article of manufacture for secure digital
certification of electronic commerce

DATE-ISSUED: November 30, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rowney; Kevin T. B.	San Francisco	CA		
Chen; Yuhua	Palo Alto	CA		

US-CL-CURRENT: 713/201; 705/76, 705/78

ABSTRACT:

Secure transmission of data is provided between a plurality of computer systems over a public communication system, such as the Internet. Secure transmission of data is provided from a party in communication with a first application resident on a first computer which is in communication with a second computer with a certification authority application resident thereon. The second computer is in communication with a third computer utilizing an administrative function resident thereon. The first, second and third computers are connected by a network, such as the Internet. A name-value pair for certification processing is created on said first computer and transmitted to an administrative function on the third computer. Then, the name-value pair is routed to the appropriate certification authority on the second computer. The administrative function also transmits other certification information from said administrative function to said certification authority on the second computer. Until, finally, a certificate is created comprising the name-value pair and the other certification information on the second computer. The certificate is utilized for authenticating identity of the party.

21 Claims, 89 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 42

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 32. Document ID: US 5987132 A

L4: Entry 32 of 59

File: USPT

Nov 16, 1999

US-PAT-NO: 5987132
DOCUMENT-IDENTIFIER: US 5987132 A

TITLE: System, method and article of manufacture for conditionally accepting a payment method utilizing an extensible, flexible architecture

DATE-ISSUED: November 16, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Rowney; Kevin T. B.	San Francisco	CA		

US-CL-CURRENT: 705/77; 705/26, 705/35, 705/39, 705/40, 705/44, 705/76, 705/79

ABSTRACT:

An architecture that provides a server that communicates bidirectionally with a gateway over a first communication link, over which service requests flow to the server for one or more merchants and/or consumers is disclosed. Service requests are associated with a particular merchant based on storefront visited by a consumer or credentials presented by a merchant. Service requests result in merchant specific transactions that are transmitted to the gateway for further processing on existing host applications. By presenting the appropriate credentials, the merchant could utilize any other computer attached to the Internet utilizing a SSL or SET protocol to query the vPOS system remotely and obtain capture information, payment administration information, inventory control information, audit information and process customer satisfaction information.

20 Claims, 108 Drawing figures Exemplary Claim Number: 14
Number of Drawing Sheets: 57

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 33. Document ID: US 5983208 A

L4: Entry 33 of 59

File: USPT

Nov 9, 1999

US-PAT-NO: 5983208
DOCUMENT-IDENTIFIER: US 5983208 A

TITLE: System, method and article of manufacture for handling transaction results in a gateway payment architecture utilizing a multichannel, extensible, flexible architecture

DATE-ISSUED: November 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Haller; Daniel R.	Menlo Park	CA		
Nguyen; Trong	Sunnyvale	CA		

US-CL-CURRENT: 705/40; 705/21, 705/44

ABSTRACT:

Secure transmission of data is provided between a plurality of computer systems over a public communication system, such as the Internet. Secure transmission of data is provided from a customer computer system to a merchant computer system, and for the further secure transmission of payment information regarding a payment instrument from the merchant computer system to a payment gateway computer system. The payment gateway system evaluates the payment information and returns a level of authorization of credit via a secure transmission to the merchant which is communicated to the customer by the merchant. The merchant can then determine whether to accept the payment instrument tendered or deny credit and require another payment instrument. An architecture that provides support for additional message types that are not SET compliant is provided by a preferred embodiment of the invention. A server communicating bidirectionally with a gateway is disclosed. The server communicates to the gateway over a first communication link, over which all service requests are initiated by the server. The gateway uses a second communication link to send service signals to the server. In response to the service signals, the server initiates transactions to the gateway or presents information on an a display device.

21 Claims, 108 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 57

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWOC	Draw Desc	Image
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☐ 34. Document ID: US 5982891 A

L4: Entry 34 of 59

File: USPT

Nov 9, 1999

US-PAT-NO: 5982891
DOCUMENT-IDENTIFIER: US 5982891 A

TITLE: Systems and methods for secure transaction management and electronic rights protection

DATE-ISSUED: November 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ginter; Karl L.	Beltsville	MD		
Shear; Victor H.	Bethesda	MD		
Spahn; Francis J.	El Cerrito	CA		
Van Wie; David M.	Sunnyvale	CA		

US-CL-CURRENT: 705/54; 705/26, 713/167

ABSTRACT:

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

102 Claims, 153 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 146

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 35. Document ID: US 5978840 A

L4: Entry 35 of 59

File: USPT

Nov 2, 1999

US-PAT-NO: 5978840

DOCUMENT-IDENTIFIER: US 5978840 A

TITLE: System, method and article of manufacture for a payment gateway system architecture for processing encrypted payment transactions utilizing a multichannel, extensible, flexible architecture

DATE-ISSUED: November 2, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nguyen; Trong	Sunnyvale	CA		
Haller; Daniel R.	Menlo Park	CA		
Subramanian; Mahadevan P.	Foster City	CA		

US-CL-CURRENT: 709/217; 705/53, 705/79

ABSTRACT:

Secure transmission of data is provided between a plurality of computer systems over a public communication system, such as the Internet. Secure transmission of data is provided from a customer computer system to a merchant computer system, and for the further secure transmission of payment information from the merchant computer system to a payment gateway computer system. The payment gateway system receives encrypted payment requests from merchants, as HTTP POST messages via the Internet. The gateway then unwraps and decrypts the requests, authenticates digital signatures of the requests based on certificates, supports transaction types and card types as required by a financial institution, and accepts concurrent VPOS transactions from each of the merchant servers. Then, the gateway converts transaction data to host-specific formats and forwards the mapped requests to the host processor using the existing financial network. The gateway architecture includes three distinct sections to enhance distribution of the functions. The upper API consists of concise functions which are available via a call out interface to custom modules. The lower API allows the gateway and the custom modules to call in to reusable functions which facilitate isolation from possible future fluctuations in structural definitions of SET data elements. The system configuration custom parameters include the more static information elements required for such things as the network address of the host or its proxy equipment, timeout values, expected length of certain messages and other system configuration information. These parameters are specified as name-value pairs in the gateway system initialization file.

34 Claims, 113 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 59

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 36. Document ID: US 5949876 A

L4: Entry 36 of 59

File: USPT

Sep 7, 1999

US-PAT-NO: 5949876

DOCUMENT-IDENTIFIER: US 5949876 A

TITLE: Systems and methods for secure transaction management and electronic rights protection

DATE-ISSUED: September 7, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ginter; Karl L.	Beltsville	MD		
Shear; Victor H.	Bethesda	MD		
Spahn; Francis J.	El Cerrito	CA		
Van Wie; David M.	Sunnyvale	CA		

US-CL-CURRENT: 705/80; 705/1, 705/39, 705/54

ABSTRACT:

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

375 Claims, 155 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 146

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 37. Document ID: US 5943424 A

L4: Entry 37 of 59

File: USPT

Aug 24, 1999

US-PAT-NO: 5943424

DOCUMENT-IDENTIFIER: US 5943424 A

TITLE: System, method and article of manufacture for processing a plurality of transactions from a single initiation point on a multichannel, extensible, flexible architecture

DATE-ISSUED: August 24, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Berger; David A.	San Mateo	CA		
Weber; Jay C.	Menlo Park	CA		
Kramer; Glenn A.	San Francisco	CA		

US-CL-CURRENT: 705/64; 380/29, 380/30, 705/26, 705/70, 705/76, 705/79

ABSTRACT:

An architecture for processing a plurality of transactions from a single point of initiation is disclosed. The initiating computer selects a terminal identification token, and associates the token with a transaction request, thereby ensuring the association of the transaction with a unique terminal identification despite being originated by the same terminal. The tokens are obtained from a token table, which contains a row for each token defined to the system. The table includes a column for the token, a column that identifies a system with which the token may be used, and a column that identifies a date and time field indicating when a particular token was selected for use. A null value in the date-time field indicates that the token for that row is not in use. A query operation selects a token with a null date-time value, and a set operation sets the date-time value to the then-current time to mark it in use. At the conclusion of the transaction, a set operation sets the date-time value to null, enabling the token to be reused for another non-concurrent transaction.

23 Claims, 108 Drawing figures Exemplary Claim Number: 10
Number of Drawing Sheets: 57

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 38. Document ID: US 5931917 A

L4: Entry 38 of 59

File: USPT

Aug 3, 1999

US-PAT-NO: 5931917
DOCUMENT-IDENTIFIER: US 5931917 A

TITLE: System, method and article of manufacture for a gateway system
architecture with system administration information accessible from a browser

DATE-ISSUED: August 3, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nguyen; Trong	Sunnyvale	CA		
Subramanian; Mahadevan P.	Foster City	CA		
Haller; Daniel R.	Menlo Park	CA		

US-CL-CURRENT: 709/250; 709/203, 709/216

ABSTRACT:

Secure transmission of data is provided between a plurality of computer systems over a public communication system, such as the Internet. Secure transmission of data is provided from a customer computer system to a merchant computer system, and for the further secure transmission of payment information from the merchant computer system to a payment gateway computer system. The payment gateway system receives encrypted payment requests from merchants, as HTTP POST messages via the Internet. The gateway then unwraps and decrypts the requests, authenticates digital signatures of the requests based on certificates, supports transaction types and card types as required by a financial institution, and accepts concurrent VPOS transactions from each of the merchant servers. Then, the gateway converts transaction data to host-specific formats and forwards the mapped requests to the host processor using the existing financial network. The gateway system architecture includes support for standard Internet access routines which facilitate access to system administration information from a commercial web browser.

20 Claims, 69 Drawing figures Exemplary Claim Number: 9
Number of Drawing Sheets: 59

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KUMC	Draw Desc	Image
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☐ 39. Document ID: US 5920861 A

L4: Entry 39 of 59

File: USPT

Jul 6, 1999

US-PAT-NO: 5920861
DOCUMENT-IDENTIFIER: US 5920861 A

TITLE: Techniques for defining using and manipulating rights management data structures

DATE-ISSUED: July 6, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hall; Edwin J.	San Jose	CA		
Shear; Victor H.	Bethesda	MD		
Tomasello; Luke S.	San Jose	CA		
Van Wie; David M.	Sunnyvale	CA		
Weber; Robert P.	Menlo Park	CA		
Worsencroft; Kim	Los Gatos	CA		
Xu; Xuejun	Fremont	CA		

US-CL-CURRENT: 707/9; 707/102, 707/4

ABSTRACT:

A descriptive data structure provides an abstract representation of a rights management data structure such as a secure container. The abstract representation may describe, for example, the layout of the rights management data structure. It can also provide metadata describing or defining other characteristics of rights management data structure use and/or processing. For example, the descriptive data structure can provide integrity constraints that provide a way to state rules about associated information. The abstract representation can be used to create rights management data structures that are interoperable and compatible with one another. This arrangement preserves flexibility and ease of use without compromising security.

101 Claims, 15 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 14

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 40. Document ID: US 5917912 A

L4: Entry 40 of 59

File: USPT

Jun 29, 1999

US-PAT-NO: 5917912

DOCUMENT-IDENTIFIER: US 5917912 A

TITLE: System and methods for secure transaction management and electronic rights protection

DATE-ISSUED: June 29, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ginter; Karl L.	Beltsville	MD		
Shear; Victor H.	Bethesda	MD		
Spahn; Francis J.	El Cerrito	CA		
Van Wie; David M.	Sunnyvale	CA		

US-CL-CURRENT: 713/187; 705/40, 709/312, 713/164

ABSTRACT:

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

58 Claims, 153 Drawing figures Exemplary Claim Number: 58

Number of Drawing Sheets: 146

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KUMC	Draw Desc	Image
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☐ 41. Document ID: US 5915019 A

L4: Entry 41 of 59

File: USPT

Jun 22, 1999

US-PAT-NO: 5915019

DOCUMENT-IDENTIFIER: US 5915019 A

TITLE: Systems and methods for secure transaction management and electronic rights protection

DATE-ISSUED: June 22, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ginter; Karl L.	Beltsville	MD		
Shear; Victor H.	Bethesda	MD		
Spahn; Francis J.	El Cerrito	CA		
Van Wie; David M.	Sunnyvale	CA		

US-CL-CURRENT: 705/54; 705/26, 705/400, 713/200

ABSTRACT:

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

101 Claims, 155 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 146

Full	Title	Citation	Front	Review	Classification	Date	Reference
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MMIC	Draw Desc	Image
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☐ 42. Document ID: US 5913061 A

L4: Entry 42 of 59

File: USPT

Jun 15, 1999

US-PAT-NO: 5913061

DOCUMENT-IDENTIFIER: US 5913061 A

TITLE: Modular application collaboration

DATE-ISSUED: June 15, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gupta; Prashant	Monterey	CA		
Mellen-Garnett; Katrina A.	Hillsborough	CA		

US-CL-CURRENT: 709/310; 709/101

ABSTRACT:

A modular application collaborator for providing inter-operability between applications including a plurality of connectors for communicating with a like plurality of applications and an interchange server. The interchange server includes an application collaboration module and a service module. The service module transfers messages between connectors and the application collaboration module. The application collaboration module defining the inter-operability between two or more applications and includes a trigger and a transaction responsive to the trigger. The trigger is activated upon receipt of data from one or more connectors resulting in the transaction delivering data to one or more connectors for transfer to an associated application.

8 Claims, 16 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 15

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 43. Document ID: US 5910987 A

L4: Entry 43 of 59

File: USPT

Jun 8, 1999

US-PAT-NO: 5910987

DOCUMENT-IDENTIFIER: US 5910987 A

TITLE: Systems and methods for secure transaction management and electronic rights protection

DATE-ISSUED: June 8, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ginter; Karl L.	Beltsville	MD		
Shear; Victor H.	Bethesda	MD		
Spahn; Francis J.	El Cerrito	CA		
Van Wie; David M.	Sunnyvale	CA		

US-CL-CURRENT: 705/52; 705/30

ABSTRACT:

The present invention provides systems and methods for secure transaction management and electronic rights protection. Electronic appliances such as computers equipped in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Distributed and other operating systems, environments and architectures, such as, for example, those using tamper-resistant hardware-based processors, may establish security at each node. These techniques may be used to support an all-electronic information distribution, for example, utilizing the "electronic highway."

2 Claims, 155 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 146

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KMJC	Draw Desc	Image
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☐ 44. Document ID: US 5892900 A

L4: Entry 44 of 59

File: USPT

Apr 6, 1999

US-PAT-NO: 5892900
DOCUMENT-IDENTIFIER: US 5892900 A

TITLE: Systems and methods for secure transaction management and electronic rights protection

DATE-ISSUED: April 6, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ginter; Karl L.	Beltsville	MD		
Shear; Victor H.	Bethesda	MD		
Sibert; W. Olin	Lexington	MA		
Spahn; Francis J.	El Cerrito	CA		
Van Wie; David M.	Sunnyvale	CA		

US-CL-CURRENT: 713/200; 713/201

ABSTRACT:

The present invention provides systems and methods for electronic commerce including secure transaction management and electronic rights protection. Electronic appliances such as computers employed in accordance with the present invention help to ensure that information is accessed and used only in authorized ways, and maintain the integrity, availability, and/or confidentiality of the information. Secure subsystems used with such electronic appliances provide a distributed virtual distribution environment (VDE) that may enforce a secure chain of handling and control, for example, to control and/or meter or otherwise monitor use of electronically stored or disseminated information. Such a virtual distribution environment may be used to protect rights of various participants in electronic commerce and other electronic or electronic-facilitated transactions. Secure distributed and other operating system environments and architectures, employing, for example, secure semiconductor processing arrangements that may establish secure, protected environments at each node. These techniques may be used to support an end-to-end electronic information distribution capability that may be used, for example, utilizing the "electronic highway."

220 Claims, 177 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 163

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 45. Document ID: US 5889863 A

L4: Entry 45 of 59

File: USPT

Mar 30, 1999

US-PAT-NO: 5889863

DOCUMENT-IDENTIFIER: US 5889863 A

TITLE: System, method and article of manufacture for remote virtual point of sale processing utilizing a multichannel, extensible, flexible architecture

DATE-ISSUED: March 30, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weber; Jay C.	Menlo Park	CA		

US-CL-CURRENT: 705/76; 705/26, 705/39, 705/40, 705/44, 705/77

ABSTRACT:

An architecture that provides a server that communicates bidirectionally with a client over a first communication link, over which service requests flow to the server for one or more merchants and/or consumers is disclosed. Service requests are associated with a particular merchant based on storefront visited by a consumer or credentials presented by a merchant. Service requests result in merchant specific transactions that are transmitted to the gateway for further processing on existing host applications. By presenting the appropriate credentials, the merchant could utilize any other computer attached to the Internet utilizing a SSL or SET protocol to query the server remotely and obtain capture information, payment administration information, inventory control information, audit information and process customer satisfaction information.

22 Claims, 109 Drawing figures Exemplary Claim Number: 12
Number of Drawing Sheets: 57

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 46. Document ID: US 5884035 A

L4: Entry 46 of 59

File: USPT

Mar 16, 1999

US-PAT-NO: 5884035

DOCUMENT-IDENTIFIER: US 5884035 A

TITLE: Dynamic distributed group registry apparatus and method for
collaboration and selective sharing of information

DATE-ISSUED: March 16, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Butman; Ronald A.	Nahant	MA		
Ramachandran; Raja	Allston	MA		
Burns; Thomas A.	Duxbury	MA		
Malone; Thomas J.	South Boston	MA		
Kmiec; Michael D.	Boston	MA		
Dougherty; Joseph C.	West Roxbury	MA		

US-CL-CURRENT: 709/218; 345/751, 707/10, 709/205

ABSTRACT:

A dynamic group registry for organizing information created by a client entity for sharing, having a plurality of publication computers networked together inside the client, each publication computer having a disk for storing a dynamic group registry and resource locators containing function names, a web server which causes the publication computer to respond to resource locators by loading the function name indicated, a database management program for organizing the dynamic group registry; a client side communications server to respond to resource locators directed to it and to direct the database management program in organizing the dynamic group registry; a client side communications resource locator list stored in each publication computer that causes functions to be selected for execution in the client side communications server so that the dynamic group registry indicates how information is to be shared amongst the designated individuals and groups with the client entity.

10 Claims, 67 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 47

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KMIC	Draw Desc	Image
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☐ 47. Document ID: US 5870562 A

L4: Entry 47 of 59

File: USPT

Feb 9, 1999

US-PAT-NO: 5870562

DOCUMENT-IDENTIFIER: US 5870562 A

TITLE: Universal domain routing and publication control system

DATE-ISSUED: February 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Butman; Ronald A.	Nahant	MA		
Ramachandran; Raja	Allston	MA		
Burns; Thomas A.	Duxbury	MA		
Malone; Thomas J.	South Boston	MA		
Kmiec; Michael D.	Boston	MA		
Dougherty; Joseph C.	West Roxbury	MA		

US-CL-CURRENT: 709/238; 709/217, 709/229

ABSTRACT:

A system for managing information communications between clients on different networks having a first computer with a disk for storing a dynamic client registry and resource locators containing function names; a web server to respond to resource locators by calling the function name; a database management program for organizing the dynamic client registry; a domain communications server which, when loaded by the web server is executed to respond to resource locators directed to it and to direct the database management program in organizing the dynamic client registry; a second computer communicating with the first computer, the second computer having a disk for storing a dynamic group registry and for storing resource locators containing function names; the second computer executing a web server which causes it to respond to resource locators by calling the function indicated, the second computer also having a database management program for organizing the dynamic group registry; a client side communications server executing in the second computer responding to resource locators directed to it and directing the database management program in organizing the dynamic group registry; a domain communications resource locator list stored in the computers that causes functions to be selected for execution in the domain communications server in the first computer; and a client side communications resource locator list stored in the computers that causes functions to be selected for execution in the client side communications server in the second computer so communications between the computers cause selected functions to be executed to manage information flow between them.

22 Claims, 65 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 45

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 48. Document ID: US 5867667 A

L4: Entry 48 of 59

File: USPT

Feb 2, 1999

US-PAT-NO: 5867667

DOCUMENT-IDENTIFIER: US 5867667 A

TITLE: Publication network control system using domain and client side communications resource locator lists for managing information communications between the domain server and publication servers

DATE-ISSUED: February 2, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Butman; Ronald A.	Nahant	MA		
Ramachandran; Raja	Allston	MA		
Burns; Thomas A.	Duxbury	MA		
Malone; Thomas J.	South Boston	MA		
Kmiec; Michael D.	Boston	MA		
Dougherty; Joseph C.	West Roxbury	MA		

US-CL-CURRENT: 709/249; 709/225, 709/227

ABSTRACT:

A publication control system for networks inside a client having several publication computers networked together, each of the publication computers having disks for storing a dynamic group registry and resource locators containing function names, a web server which, when executed by the publication computer, causes the publication computer to respond to resource locators by calling the function indicated, a database management program for organizing the dynamic group registry; and a client side communications server, which responds to resource locators directed to it and directs the database management program in organizing the dynamic group registry; the system also has a domain computer having a disk for storing a dynamic client registry and resource locators containing function names; a web server which, when executed by the domain computer, causes the domain computer to respond to the resource locators by calling the function name indicated, a database management program for organizing the dynamic client registry; a domain communications server which, when loaded by the web server, is executed by the domain computer, to respond to resource locators directed to it and to direct the database management program in organizing the dynamic client registry; a domain communications resource locator list in all computers that causes functions to be executed in the domain communications server; a client side communications resource locator list in all computers that causes functions to be executed in each client side communications server so that communications between the domain computer and the publication computers cause the selected functions to control internal publications.

16 Claims, 65 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 45

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw. Desc	Image
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☐ 49. Document ID: US 5867665 A

L4: Entry 49 of 59

File: USPT

Feb 2, 1999

US-PAT-NO: 5867665

DOCUMENT-IDENTIFIER: US 5867665 A

TITLE: Domain communications server

DATE-ISSUED: February 2, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Butman; Ronald A.	Nahant	MA		
Ramachandran; Raja	Allston	MA		
Burns; Thomas A.	Duxbury	MA		
Malone; Thomas J.	South Boston	MA		
Kniec; Michael D.	Boston	MA		
Dougherty; Joseph C.	West Roxbury	MA		

US-CL-CURRENT: 709/239; 709/217, 709/223

ABSTRACT:

A domain communications server having a first computer with a disk for storing a dynamic client registry and resource locators containing function names; a web server to respond to resource locators by calling the function name; a database management program for organizing the dynamic client registry; a domain communications server which, when loaded by the web server is executed to respond to resource locators directed to it and to direct the database management program in organizing the dynamic client registry; secondary computers communicating with the first computer, the secondary computers each having a disk for storing a dynamic group registry and for storing resource locators containing function names; each secondary computer executing a web server which causes it to respond to resource locators by calling the function indicated, each secondary computer also having a database management program for organizing its dynamic group registry; a client side communications server executing in each secondary computer responding to resource locators directed to it and directing the database management program in organizing its dynamic group registry; a domain communications resource locator list stored in the computers that causes functions to be selected for execution in the domain communications server in the first computer; and a client side communications resource locator list stored in the computers that causes functions to be selected for execution in the client side communications server in the secondary computers so communications between the computers cause selected functions to be executed to manage information flow between them.

8 Claims, 65 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 45

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 50. Document ID: US 5867495 A

L4: Entry 50 of 59

File: USPT

Feb 2, 1999

US-PAT-NO: 5867495

DOCUMENT-IDENTIFIER: US 5867495 A

TITLE: System, method and article of manufacture for communications utilizing calling, plans in a hybrid network

DATE-ISSUED: February 2, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Elliott; Isaac K.	Colorado Springs	CO		
Krishnaswamy; Sridhar	Cedar Rapids	IA		

US-CL-CURRENT: 370/352; 370/389, 370/392, 379/11, 379/115.01, 379/90.01, 379/93.07

ABSTRACT:

Telephone calls, data and other multimedia information is routed through a hybrid network which includes transfer of information across the internet utilizing telephony routing information and internet protocol address information. A media order entry captures complete user profile information for a user. This profile information is utilized by the system throughout the media experience for routing, billing, monitoring, reporting and other media control functions. Users can manage more aspects of a network than previously possible, and control network activities from a central site. Calling card access is provided for users and supports typical calls as well as media transfers over the hybrid network including over the internet.

27 Claims, 190 Drawing figures Exemplary Claim Number: 19
Number of Drawing Sheets: 132

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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Generate Collection

Terms	Documents
13 AND Financial	59

Display

☐

Documents, starting with Document:

Display Format:

Change Format

WEST[Generate Collection](#)**Search Results - Record(s) 51 through 59 of 59 returned.**☐ **51. Document ID: US 5867494 A**

L4: Entry 51 of 59

File: USPT

Feb 2, 1999

US-PAT-NO: 5867494

DOCUMENT-IDENTIFIER: US 5867494 A

TITLE: System, method and article of manufacture with integrated video conferencing billing in a communication system architecture

DATE-ISSUED: February 2, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Krishnaswamy; Sridhar	Cedar Rapids	IA		
Elliott; Isaac K.	Colorado Springs	CO		
Reynolds; Tim E.	Iowa City	IA		
Forgy; Glen A.	Iowa City	IA		
Solbrig; Erin M.	Cedar Rapids	IA		

US-CL-CURRENT: 370/352; 370/389, 370/392, 379/114.15, 379/90.01, 379/93.07

ABSTRACT:

Telephone calls, data and other multimedia information including video, audio and data is routed through a switched network which includes transfer of information across the internet. Users can participate in video conference calls in which each participant can simultaneously view the video from each other participant and hear the mixed audio from all participants. Users can also share data and documents with other video conference participants. Users can manage more aspects of a network than previously possible, and control network activities from a central site. Billing of the conference call is accomplished utilizing a billing detail record to capture events associated with a call as they occur and debit the appropriate bill.

20 Claims, 192 Drawing figures Exemplary Claim Number: 7

Number of Drawing Sheets: 134

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KMC	Draw Desc	Image
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☐ **52. Document ID: US 5850446 A**

L4: Entry 52 of 59

File: USPT

Dec 15, 1998

US-PAT-NO: 5850446
DOCUMENT-IDENTIFIER: US 5850446 A

TITLE: System, method and article of manufacture for virtual point of sale processing utilizing an extensible, flexible architecture

DATE-ISSUED: December 15, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Berger; David A.	San Mateo	CA		
Weber; Jay C.	Menlo Park	CA		
Madapurmath; Vilas I.	Sunnyvale	CA		

US-CL-CURRENT: 705/79; 380/59, 705/26, 713/153

ABSTRACT:

Secure transmission of data is provided between a plurality of computer systems over a public communication system, such as the Internet. Secure transmission of data is provided from a customer computer system to a merchant computer system, and for the further secure transmission of payment information regarding a payment instrument from the merchant computer system to a payment gateway computer system. The payment gateway system evaluates the payment information and returns a level of authorization of credit via a secure transmission to the merchant which is communicated to the customer by the merchant. The merchant can then determine whether to accept the payment instrument tendered or deny credit and require another payment instrument. An architecture that provides support for additional message types that are not SET compliant is provided by a preferred embodiment of the invention. A server communicating bidirectionally with a gateway is disclosed. The server communicates to the gateway over a first communication link, over which all service requests are initiated by the server. The gateway uses a second communication link to send service signals to the server. In response to the service signals, the server initiates transactions to the gateway or presents information on an a display device.

21 Claims, 106 Drawing figures Exemplary Claim Number: 8
Number of Drawing Sheets: 56

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 53. Document ID: US 5812668 A

L4: Entry 53 of 59

File: USPT

Sep 22, 1998

US-PAT-NO: 5812668
DOCUMENT-IDENTIFIER: US 5812668 A

TITLE: System, method and article of manufacture for verifying the operation of a remote transaction clearance system utilizing a multichannel, extensible, flexible architecture

DATE-ISSUED: September 22, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Weber; Jay C.	Menlo Park	CA		

US-CL-CURRENT: 705/79; 705/16, 705/21, 705/75, 902/22

ABSTRACT:

An architecture for verifying the operation of a remote transaction clearance system is disclosed. A merchant-controlled computer communicates with a test gateway computer over a communications channel. The merchant-controlled computer transmits messages representing test transactions to the test gateway computer on the communications channel. The test gateway computer responds with simulated transaction responses. In another aspect of the invention, the transaction responses include configuration data that is used by the merchant-operated computer to configure itself to access a production gateway computer.

20 Claims, 107 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 55

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 54. Document ID: US 5812533 A

L4: Entry 54 of 59

File: USPT

Sep 22, 1998

US-PAT-NO: 5812533

DOCUMENT-IDENTIFIER: US 5812533 A

TITLE: Service provision in communications networks

DATE-ISSUED: September 22, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Cox; Richard D.	Garland	TX		
Hunter; Andrew T.	Dallas	TX		
Rand; Jeffrey K.	Coppell	TX		

US-CL-CURRENT: 370/259; 370/409

ABSTRACT:

A communications network offers a variety of services to the customer while being able to add or modify the portfolio of services available. A service delivery infrastructure is provided, which would sit in the Service Control Point of an intelligent network architecture, and which delivers services using an array of service independent features. In the arrangement described, the service delivery infrastructure has an object oriented architecture and interacts with systems, such as billing and network management in the communications network by means of objects within the infrastructure. An aspect of the infrastructure is the provision of selected sets of services to users of the communications network, which selected sets effectively provide dedicated service networks to each customer.

14 Claims, 48 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 24

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 55. Document ID: US 5781720 A

L4: Entry 55 of 59

File: USPT

Jul 14, 1998

US-PAT-NO: 5781720

DOCUMENT-IDENTIFIER: US 5781720 A

TITLE: Automated GUI interface testing

DATE-ISSUED: July 14, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Parker; Marsten Hugh	Reading	MA		
Kepple; Laurence Ralph	West Newton	MA		
Sklar; Leah Ruth	Auburndale	MA		
Laroche; David Christopher	Hampton	NH		

US-CL-CURRENT: 714/38

ABSTRACT:

A method for automated testing of both new and revised computer application programs which use a Graphical User Interface (GUI). Simulated user events such as keyboard or mouse actions are automatically input into the GUI interface. The GUI is then monitored to observe the changes to the GUI in response to the input. The invention comprises a test script which is written in a high level programming language, a test executive which executes the test script, and a test driver which provides the interface to the GUI. The test script is directed towards operation on logical objects, instead of GUI-specific references. The primary responsibility of the test executive is to convert GUI-independent references into GUI-specific references. The test driver takes the GUI-specific references from the test executive and performs the actual interface to the GUI objects. A uniform hierarchial naming scheme is employed to identify each Logical Screen Element (LSE) under test, LSEs being the objects used in the GUI environment to interface with the user.

32 Claims, 15 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 12

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 56. Document ID: US 5758351 A

L4: Entry 56 of 59

File: USPT

May 26, 1998

US-PAT-NO: 5758351
DOCUMENT-IDENTIFIER: US 5758351 A

TITLE: System and method for the creation and use of surrogate information system objects

DATE-ISSUED: May 26, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gibson; William	Surrey			GB2
Marshall; David R.	Allen	TX		
Turner; Steve	Middlesex			GB2
Dawson; William N.	Bellevue	WA		
Hogan; Patrick M.	Austin	TX		

US-CL-CURRENT: 707/104.1; 707/10, 707/3

ABSTRACT:

The present invention defines a consistent method and system for enabling components in an information system to invoke operations that may be distributed across multiple computing platforms, through the provision and use of executable operations whose behaviors are determined from information stored and extracted from a Catalog (164) using an Operation Definition Manager (82). The stored information is used by a Surrogate Object Definition Module (96) to define a Surrogate Object Type structure which enables execution of any of the operations described within it. A Surrogate Object Manager (94), along with an Operation Connection Manager (104, 118, 130 or 132), is provided which assists the user in developing applications by providing access to the definition of the input and output arguments of the operations included in the Surrogate Object Type structure (244). The present invention further includes an Operation Connection Manager (104, 118, 130 or 132) which, together with the Surrogate Object Manager (94), provides a consistent means for an Operation Requestor (92) to invoke an operation and exchange input and output arguments, independent of the intervening network communication protocol or the hardware platform type, operating system and database management system upon which the operation has been implemented.

20 Claims, 16 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 15

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 57. Document ID: US 5600789 A

L4: Entry 57 of 59

File: USPT

Feb 4, 1997

US-PAT-NO: 5600789

DOCUMENT-IDENTIFIER: US 5600789 A

TITLE: Automated GUI interface testing

DATE-ISSUED: February 4, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Parker; Marsten H.	Reading	MA		
Kepple; Laurence R.	West Newton	MA		
Sklar; Leah R.	Auburndale	MA		
Laroche; David C.	Hampton	NH		

US-CL-CURRENT: 714/38

ABSTRACT:

A method for automated testing of both new and revised computer application programs which use a Graphical User Interface (GUI). Simulated user events such as keyboard or mouse actions are automatically input into the GUI interface. The GUI is then monitored to observe the changes to the GUI in response to the input. The invention comprises a test script which is written in a high level programming language, a test executive which executes the test script, and a test driver which provides the interface to the GUI. The test script is directed towards operation on logical objects, instead of GUI-specific references. The primary responsibility of the test executive is to convert GUI-independent references into GUI-specific references. The test driver takes the GUI-specific references from the test executive and performs the actual interface to the GUI objects. A uniform hierarchial naming scheme is employed to identify each Logical Screen Element (LSE) under test, LSEs being the objects used in the GUI environment to interface with the user.

2 Claims, 15 Drawing figures Exemplary Claim Number: 1

Number of Drawing Sheets: 12

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 58. Document ID: US 5523942 A

L4: Entry 58 of 59

File: USPT

Jun 4, 1996

US-PAT-NO: 5523942

DOCUMENT-IDENTIFIER: US 5523942 A

TITLE: Design grid for inputting insurance and investment product information
in a computer system

DATE-ISSUED: June 4, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tyler; Max C.	Duxbury	MA		
Maimone; Maureen A.	Peabody	MA		
Lev; Christina M.	Framingham	MA		
Baker; Norman W.	Haverhill	MA		
Watson; Robert W.	Melrose	MA		

US-CL-CURRENT: 705/4; 705/34, 707/507

ABSTRACT:

A computer implemented graphical user interface for receiving instructions and information relating to insurance products, and for displaying insurance proposals relating thereto. The graphical user interface has an insured section for receiving personal information about a person to be insured and a product design section for receiving information specifying an insurance product and the insurance products components. The product design section has a design grid which is a matrix enabling input of product information, premium information and dividend information relating to a selected insurance product. The design grid enables a user to select a solve procedure and variable as the subject of the selected solve procedure.

10 Claims, 32 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 32

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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☐ 59. Document ID: US 5446891 A

L4: Entry 59 of 59

File: USPT

Aug 29, 1995

US-PAT-NO: 5446891

DOCUMENT-IDENTIFIER: US 5446891 A

TITLE: System for adjusting hypertext links with weighed user goals and activities

DATE-ISSUED: August 29, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kaplan; Craig A.	Santa Cruz	CA		
Chen; James R.	Saratoga	CA		
Fallside; David C.	San Jose	CA		
Fenwick; Justine R.	Santa Cruz	CA		
Forcier; Mitchell D.	Walnut Creek	CA		
Wolff; Gregory J.	Mountain View	CA		

US-CL-CURRENT: 707/2; 707/104.1, 707/5, 707/501.1

ABSTRACT:

A smart hypermedia system that acquires user characteristics either directly or inferentially. Simple associative networks serve to model user profiles, including relationships between user goals and the hypermedia information nodes. Hypermedia links to other nodes are recommended by ranking a link list in an order that depends on one or more user profiles containing information relating to users' goals and interests. Users can teach the system directly by rearranging the order of suggested links on the list. The system can also learn indirectly by observing how long and in what sequence the user views each hypermedia information node. User profiles can be combined to form group profiles and may be dynamically and continuously updated to form an adaptive system profile. The two system learning modes may be simultaneous or disjoint.

29 Claims, 7 Drawing figures Exemplary Claim Number: 1
Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference
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KWIC	Draw Desc	Image
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Generate Collection

Terms	Documents
13 AND Financial	59

Display

50

Documents, starting with Document:

59

Display Format:

REV

Change Format